multiplexer punctures a number of bits of said encoded symbols for rate matching.

52. (New) The mobile communication system as claimed in claim 48, wherein the QoS parameters include information that can define the data size of a frame.

53. (New) The mobile communication system as claimed in claim 52, wherein the QoS parameter includes at least the data rate, and the number of the input frames to be assembled into the super frame is determined by said data rate and the size of the input data block.

54. (New) The mobile communication system as claimed in claim 52, wherein the processor determines to concatenate the input data blocks if the size of the input data block is less than 320 bits.

55. (New) The mobile communication system as claimed in claim 48, wherein the QoS parameter includes at least a permissible delay, and the number of input data blocks to be assembled in the super frame is determined by the permissible delay.

56. (New) The mobile communication system as claimed in claim 48, wherein the QoS parameter includes at least a permissible error rate, and the number of the input frames to be assembled into the super frame is determined based on the permissible error rate.

57. (New) The mobile communication system as claimed in claim 48, wherein said QoS parameter includes at least a receiver memory size, and the number of the input frames to be assembled into the super frame is determined based on the receiver memory size.

58. (New) The mobile communication system as claimed in claim 48, wherein the system is installed in a base station.

59. (New) The mobile communication system as claimed in claim 48, wherein the system is installed in a mobile station.

60. (New) A channel encoding method for a mobile communication system having a turbo encoder capable of processing variable size input data blocks, comprising the steps of:

determining to concatenate the input data blocks to make a super frame if the input data block size is less than a predetermined value;

receiving the super frame which is composed of a number of input data blocks;

first encoding the super frame;

interleaving the super frame to generate an interleaved super frame; and

second encoding the interleaved super frame.

61. (New) The channel encoding method as claimed in claim 60, further comprising the step of performing channel interleaving in accordance with the size of the super frame.

62. (New) The channel encoding method as claimed in claim 61, wherein the predetermined value is 320 bits.

63. (New) A mobile communication system having a turbo encoder capable of processing variable size input data blocks:

a processor for determining to segment an input data block to make a number of sub frames according to a QoS parameter;

a buffer for storing the input data block;

a first constituent encoder for receiving a sub frame and encoding the sub frame data;

an interleaver for interleaving the sub frame to generate an interleaved sub frame; and

a second constituent encoder for encoding the interleaved sub frame.

64. (New) The mobile communication system as claimed in claim 63, further comprising a channel interleaver for interleaving said encoded sub frames at a time.

65. (New) The mobile communication system as claimed in claim 63, wherein the number of segmented sub frames is determined according to the size of input data block.

66. (New) The mobile communication system as claimed in claim 63, wherein the processor determines to segment the input data block when the size of the input data block is more than 20480 bits.

67. (New) The mobile communication system as claimed in claim 63, wherein the QoS parameter is delay time.

68. (New) The mobile communication system as claimed in claim 63, wherein the QoS parameter includes a delay time, and the number of segmented sub frames is determined by the delay time.

69. (New) The mobile communication system as claimed in claim 63, wherein the QoS parameter includes at least an error rate, and the number of segmented sub frames is determined by the error rate.

70. (New) The mobile communication system as claimed in claim 63, wherein the system is installed in a base station.

71. (New) The mobile communication system as claimed in claim 63, wherein the system is installed in a mobile station.

72. (New) A channel encoding method for a mobile communication system having a turbo encoder capable of processing variable size input data blocks, comprising the steps of:

determining a number of sub frames generated from one input frame, according to a QoS parameter;

segmenting the input frame into the determined number of sub frames;

first encoding a sub frame data to encode the input frame by a sub frame unit;

interleaving the sub frame data to generate a interleaved sub frame data; and

second encoding the interleaved sub frame data.

73. (New) The channel encoding method as claimed in claim 72, further comprising

the step of combining encoded symbols of each sub frame of the input frame; and

channel interleaving the combined symbols.

74. (New) The channel encoding method as claimed in claim 72, wherein the number of segmented sub frames is determined according to the size of the input frame data.

75. (New) The channel encoding method as claimed in claim 72, wherein the input data block when the size of the input data block is 20480 bits.

76. (New) The mobile communication system as claimed in claim 72, wherein the QoS parameter includes at least delay time.

77. (New) The channel encoding method as claimed in claim 72, wherein the number of segmented sub frames is determined by the permissible delay.

78. (New) The channel encoding method as claimed in claim 72, wherein the number of the segmented sub frames is determined by the error rate.

79. (New) A channel encoding method for a mobile communication system having a turbo encoder capable of processing variable size input data blocks, comprising the steps of:

comparing the number of bits input into the turbo encoder with a predetermined value;

deciding to segment a input frame if the number of bits input into the turbo encoder is more than the predetermined value, and

turbo encoding a sub frame data which is segmented from the input data block.

80. (New) The channel encoding method as claimed in claim 79, wherein the predetermined value is less than 20480 bits.

81. (New) A mobile communication system having a turbo decoder capable of processing variable size input data blocks, comprising:

a decoder for turbo decoding a super frame data being received as a super frame, wherein

said super frame is composed as a plurality of consecutive original input data frames; and

a frame recombiner for recombining an output of the decoder into the plurality of data frames in accordance with message information about the number of original data frames constituting said super frame.

82. (New) The mobile communication system as claimed in claim 81, said message information being received during a call setup.

83. (New) The mobile communication system as claimed in claim 81, further comprising a processor for determining the number of original input data frames constituting said super frame based upon received message information about the number of the original input data frames composed into the super frame and the size of the respective frames, and providing the determined number and size information to the frame recombiner.

84. (New) The mobile communication system as claimed in claim 81, wherein the system is installed in a base station.

85. (New) The mobile communication system as claimed in claim 81, wherein the system is installed in a mobile station.

86. (New) A channel decoding method for a mobile communication system having a turbo decoder capable of processing variable size input data blocks, comprising the steps of:

turbo decoding data being received by a super frame, wherein said super frame is composed as a plurality of consecutive original input data frames; and

recombining the turbo decoded data into the plurality of consecutive original input data frames in accordance with message information about the number of the frames constituting said super frame.

87. (New) A mobile communication system having a turbo decoder capable of processing variable size input data blocks, comprising:

a decoder for turbo decoding a sub frame data being received as a sub frame, wherein

said sub frame is segmented from one original input data frame; and

a frame recombiner for recombining an output of the decoder into the original input data frame in accordance with message information about the number of the sub frames.

88. (New) The mobile communication system as claimed in claim 87, further comprising a processor for determining the number of the sub frames and the size of the respective sub frames upon receiving the message information about the number of the sub frames and the size of the respective sub frames, and providing the determined number and size information to the frame recombiner.

89. (New) The mobile communication system as claimed in claim 87, wherein the system is installed in a base station.

90. (New) The mobile communication system as claimed in claim 87, wherein the system is installed in a mobile station.

91. (New) A channel decoding method for a mobile communication system having a turbo decoder capable of processing variable size input data blocks, comprising the steps of:

segmenting received data into multiple sub frames according to received message information.

turbo decoding said sub frame unit; and

recombining the turbo decoded data frame into the received frame in response to said message information about the number of the sub frames.

92. (New) A mobile communication system having a turbo encoder capable of processing variable size input data blocks, comprising:

a processor for determining to concatenate a number of consecutive input data block to compose a super frame when the input data block size is less than a predetermined value;

a buffer for storing the input data blocks;

a first constituent encoder for encoding the super frame data received from the buffer;

an interleaver for interleaving the data of the super frame;

a second constituent encoder for encoding the interleaved data of the super frame; and

a channel interleaver for interleaving encoded data of the turbo encoder.

93. (New) The mobile communication system as claimed in claim 92, the predetermined value is 320 bits.

94. (New) The mobile communication system as claimed in claim 93, the processor concatenates the input data block for composing the super frame has more than 320 bits.

95. (New) A channel encoding method for a mobile communication system having a turbo encoder capable of processing variable size input data blocks, comprising the steps of:

comparing the number of bits input to a turbo encoder with a predetermined value;

deciding to compose a super frame if the number of bits input to a turbo encoder is less than the predetermined value; and

turbo encoding the super frame data which is composed by a number of input data block.

96. (New) The channel encoding method as claimed in claim 95, wherein the predetermined value is less than 320 bits.

97. (New) A mobile communication system having a turbo encoder capable of processing variable size input data blocks, comprising:

a processor for determining to segment one input data block to compose a plurality of sub frames when the input data block size is more than a predetermined value;

a buffer for storing the input data blocks;

a first constituent encoder for encoding the sub frame data received from the buffer;

an interleaver for interleaving the data of the sub frame;

a second constituent encoder for encoding the interleaved data of the sub frame; and

a channel interleaver for interleaving encoded data of the turbo encoder.

98. (New) The mobile communication system as claimed in claim 97, the predetermined value is 20480 bits.